

IN THE CLAIMS

1 1. (Previously presented) A method for use in a communications endpoint, the
2 method comprising the steps of:

3 determining a signature of a communications channel, wherein the signature of
4 the communications channel is a second order statistic of a signal-to-noise ratio of a
5 signal received from the communications channel;

6 performing power control over the communications channel wherein the power
7 control compares a metric value and a target metric value, such that the target metric
8 value is adjusted as a function of the determined signature of the communications
9 channel.

1 2. (Original) The method of claim 1 wherein the metric is a bit error rate (BER).

1 3. (Canceled)

1 4. (Previously presented) The method of claim 1 wherein the determining step
2 includes the steps of:

3 collecting signal-to-noise ratio (SNR) values of the signal received from the
4 communications channel; and

5 calculating the second order statistic of the collected SNR values.

1 5. (Canceled)

1 6. (Original) The method of claim 1 wherein the communications endpoint is a
2 wireless endpoint.

1 7. (Original) The method of claim 1 wherein the metric is a symbol error count.

1 8. (Previously presented) The method of claim 7 wherein the determining step
2 includes the step of monitoring the symbol error count of the received signal for
3 determining a standard deviation of the received symbol error count; and the performing
4 step includes the step of adjusting a target symbol error count for the received signal as
5 a function of the standard deviation for use in providing the power control.

1 9. (Previously presented) The method of claim 1 wherein the determining step
2 includes the steps of:

3 monitoring a symbol error count of the received signal for determining a standard
4 deviation of a received symbol error count;

5 setting a target symbol error rate as a function of the standard deviation; and

6 wherein the performing step includes the step of

7 adjusting a target signal-to-noise ratio for the received signal depending on the
8 difference between the set target symbol error rate and the actual symbol error count
9 produced by the receiver.

1 10. (Original) The method of claim 1 wherein the performing power control step
2 performs symbol error count based reverse outer loop power control with adaptive
3 symbol error rate targets.

1 11. (Previously presented) A method for use in a communications endpoint, the
2 method comprising the steps of:

3 receiving a signal from a wireless endpoint;

4 developing a second order statistic from the received signal based on a signal-to-
5 noise ratio of the received signal; and

6 performing power control with the wireless endpoint as a function of the second
7 order statistic.

1 12. (Previously presented) The method of claim 11 wherein the developing step
2 further comprises:

3 adjusting a bit error rate target value as a function of the second order
4 statistic;

5 and the performing step includes the step of performing reverse-link outer loop
6 power control as a function of a comparison between a bit error rate value of the
7 received signal and the adjusted bit error rate target value.

1 13. (Original) The method of claim 11 wherein the communications endpoint is a
2 wireless endpoint.

1 14. (Original) The method of claim 11 wherein the power control is a symbol error
2 count based power control.

1 15. (Original) The method of claim 11 wherein the developing step includes the
2 step of monitoring a symbol error count of the received signal for determining a
3 standard deviation of the received symbol error count; and the performing step includes
4 the step of adjusting a target symbol error count for the received signal as a function of
5 the standard deviation for use in providing the power control.

1 16. (Original) The method of claim 11 wherein the developing step includes the
2 steps of:

3 monitoring a symbol error count of the received signal for determining a standard
4 deviation of the received symbol error count;

5 setting a target symbol error rate as a function of the standard deviation; and

6 the performing step includes the step of adjusting a target signal-to-noise ratio for
7 the received signal depending on the difference between the set target symbol error
8 rate and the actual symbol error count produced by the receiver.

1 17. (Previously presented) A method for use in a communications endpoint, the
2 method comprising the steps of:

3 measuring a signature of a fading environment, wherein the measuring includes
4 calculating a standard deviation value of a signal-to-noise ratio of a received signal; and

5 performing power control by adjusting a target metric value as a function of the
6 measured signature.

1 18. (Canceled)

1 19. (Previously presented) The method of claim 17 wherein the performing step
2 uses the standard deviation value of the signal-to-noise ratio to adjust the target metric
3 value.

1 20. (Original) The method of claim 17 wherein the metric value is a bit error rate
2 (BER).

1 21. (Previously presented) The method of claim 17 wherein the performing step
2 adds a value to a signal-to-noise ratio target value, wherein the added value is selected
3 as a function of the measured signature of the fading environment.

1 22. (Original) The method of claim 17 wherein the performing step includes the
2 steps of:

3 estimating a bit error rate (BER);
4 comparing the estimated BER to a target BER value; and
5 adjusting a target signal-to-noise ratio value as a result of the comparison by
6 adding a value to the target signal-to-noise ratio;
7 wherein the value added to the target signal-to-noise-ratio is selected as a
8 function of the measured signature.

1 23. (Original) The method of claim 17 wherein the communications endpoint is a
2 wireless endpoint.

1 24. (Previously presented) An apparatus for use in a communication endpoint,
2 the apparatus comprising:

3 a receiver for receiving a signal;
4 a controller for (a) developing a signature of a communications channel from the
5 received signal, wherein the controller further determines the signature of the
6 communications channel by collecting signal-to-noise ratio values of the received signal
7 and by calculating a second order statistic of the collected signal-to-noise ratio values;
8 and (b) performing power control over the communications channel by adjusting a target
9 metric value as a function of the signature of the communications channel.

1 25. (Original) The apparatus of claim 24 further comprising a decoder for
2 decoding the received signal and wherein the metric is a bit error rate (BER) of the
3 decoded received signal.

1 26. (Canceled)

1 27. (Canceled)

1 28. (Previously presented) The apparatus of claim 24 further comprising a
2 memory for storing a look-up table which maps values of the second order statistic to
3 adjustment values for use in adjusting the target metric value.

1 29. (Original) The apparatus of claim 24 wherein the metric value is signal-to-
2 noise (SNR).

1 30. (Original) The apparatus of claim 24 wherein the target metric value is a
2 target signal-to-noise ratio (SNR) and the controller adjusts the SNR target value by
3 adding a value to the SNR target value, wherein the added value is selected as a
4 function of the developed signature.

1 31. (Original) The apparatus of claim 24 wherein the communications endpoint is
2 a wireless endpoint.

1 32. (Original) The apparatus of claim 24 wherein the metric is a symbol error
2 count.

1 33. (Original) The apparatus of claim 24 wherein the controller monitors a
2 symbol error count of the received signal for determining a standard deviation of the
3 received symbol error count; and adjusts a target symbol error count for the received
4 signal as a function of the standard deviation for use in providing the power control.

1 34. (Original) An apparatus for use in a communications endpoint, the apparatus
2 comprising:

3 a decoder for decoding a frame of a received signal and for providing a signal
4 representative of log-likelihood ratios with respect to information bits of the decoded
5 frame;

6 a bit error estimate generator responsive to the signal representative of the log-
7 likelihood ratios for providing a bit error rate estimate; and

8 a processor for performing reverse outer loop power control (ROLPC) over a
9 communications channel wherein the ROLPC performs a comparison between the bit
10 error rate estimate and a target bit error rate value such that the target bit error rate

11 value is adjusted as a function of a signature of the communications channel.

1 35. (Original) The apparatus of claim 34 wherein the processor further
2 determines the signature of the communications channel by calculating a second order
3 statistic of a received signal-to-noise ratio (SNR).

1 36. (Original) The apparatus of claim 35 further comprising a memory for storing
2 a look-up table which maps values of the second order statistic to adjustment values for
3 use in adjusting the target bit error rate value.

1 37. (Original) The apparatus of claim 34 wherein the communications endpoint is
2 a wireless endpoint.

1 38. (Previously presented) Apparatus for use in equipment for providing power
2 control in a cellular system, the apparatus comprising:
3 a receiver for receiving a signal from a wireless endpoint;
4 a controller for (a) developing a second order statistic from the received signal,
5 wherein the controller calculates the second order statistic of collected signal-to-noise
6 ratio values of the received signal, and wherein said second order statistic is used to
7 determine an adjustment to a target metric value; and (b) performing power control with
8 the wireless endpoint as a function of the second order statistic.

1 39. (Canceled)

1 40. (Previously presented) The apparatus of claim 38 wherein the metric value is
2 a bit error rate (BER).

1 41. (Original) The apparatus of claim 38 wherein the power control is a symbol
2 error count based power control.

1 42. (Original) The apparatus of claim 38 wherein the controller monitors a
2 symbol error count of the received signal for determining a standard deviation of the
3 received symbol error count; and adjusts a target symbol error count for the received
4 signal as a function of the standard deviation for use in providing the power control.

- 1 43. (Previously presented) The apparatus of claim 38 further comprising a
- 2 transmitter for transmitting power control information to a mobile station.